

AMENDMENTS TO THE CLAIMS

Claims 1-40. (Canceled.)

41. (New) A vessel filter including a conductor loop that forms the inductance of an electrical resonance circuit, wherein the conductor loop (11a, 11b; 21a-f; 41) is a unitary piece and forms the vessel filter (10; 20; 40).

42. (New) The vessel filter according to Claim 41, wherein there is at least one integrated circuit coupled to the resonance circuit so that it is adjustable or tunable by the integrated circuit.

43. (New) The vessel filter according to Claim 41, wherein the conductor loop (11a, 11b; 21a-f; 41) has individual sections (14, 14a-d; 24; 301a-c; 44) and spacers and/or insulators, in which the spacers and/or insulators keep the individual sections (14, 14a-d; 24; 301a-c; 44) of the conductor loop at a spacing from each other and/or insulate them relative to each other.

44. (New) The vessel filter according to Claim 43, wherein the insulators simultaneously form an internal capacitance in conjunction with at least one conductor loop (11a, 11b; 21a-f; 41).

45. (New) The vessel filter according to Claim 41, wherein the conductor loop (11a, 11b; 21a-f; 41) is enclosed with a nonconductor, especially plastic and/or ceramic.

46. (New) The vessel filter according to Claim 45, which further includes a capacitance that is adjusted within a liquid via the enclosure with a certain layer thickness.

47. (New) The vessel filter according to Claim 41, wherein the resonance circuit has a resonance frequency, especially in the high-frequency range, that corresponds to the frequency of an external magnetic field, especially an MR tomograph.

48. (New) The vessel filter according to Claim 41, wherein the conductor loop (11a, 11b; 21a-f; 41) has at least one electrically nonconducting material, on whose surface at least one conductor material, especially gold, platinum, tantalum and/or conducting alloys, is applied.

49. (New) The vessel filter according to Claim 41, wherein the conductor loop (11a, 11b; 21a-f; 41) is deployable.

50. (New) The vessel filter according to Claim 49, wherein the conductor loop (11a, 11b; 21a-f; 41) is deployable during and/or after implantation in a body.

51. (New) The vessel filter according to Claim 41, wherein the conductor loop (11a, 11b; 21a-f; 41) has several conductor loop windings (14, 14a-d) guided so that the conductor loop (11a, 11b; 21a-f; 41) forms an elongated base (12a-e) that is sealed on at least one side with a screen-like filter cage (13a-d).

52. (New) The vessel filter according to Claim 41, wherein the vessel filter (20; 40) includes a plurality of conductor loop windings (24a-c; 301a-e, 304, 304b; 44) guided so that the greatest spacing of the conductor loop windings (24a-c; 301a-e, 304, 304b; 44) from each other is present in the center of the vessel filter (24; 40) and has a reduced spacing of the conductor loop windings (24a-c, 301a-e, 304, 304b; 44) from each other on at least one edge side.

53. (New) The vessel filter according to Claim 52, wherein the spacing of the conductor loops windings (24a-c; 301a-e, 304, 304b; 44) from each other is reduced toward edge sides relative to the center of the vessel filter (20; 40).

54. (New) The vessel filter according to Claim 41, wherein the vessel filter (40) includes a plurality of conductor loop windings (44) that merge on one side of the filter in a filter cage (53) and extend leg-like to the other side of the filter.

55. (New) The vessel filter according to Claim 41, wherein the vessel filter (40) has at least one conductor loop winding (44) forming at least one extension (46) that serves for connection of the filter to a vessel wall.

56. (New) The vessel filter according to Claim 55, wherein adjacent regions of the conductor loop winding (44) are guided at limited spacing from each other in extension (46).

57. (New) The vessel filter according to Claim 55, wherein adjacent regions of conductor loop winding (44) are connected without intermediate space to each other in extension (46), especially are produced from one piece, welded, soldered or pressed.

58. (New) The vessel filter according to Claim 41, wherein the vessel filter (10; 20; 40) forms a double-filter in which the respective ends of the conductor loops each form a filter cage (13a, 13b; 22a, 22b).

59. (New) The vessel filter according to Claim 41, wherein the conductor loop (21a, 21b, 21d-f; 41) has individual windings that extend in the longitudinal direction of the vessel filter (10; 20; 40).

60. (New) The vessel filter according to Claim 41, wherein the vessel filter (10; 20; 40) has at least one brace (47) for fastening of the vessel filter (10; 20; 40) which is connected to conductor loop (11a, 11b; 21a, 21b, 21d-f; 41).

61. (New) The vessel filter according to Claim 60, wherein said at least one brace (47) is conducting and is connected conducting with said conductor loop (11a, 11b; 21a, 21b, 21d-f; 41).

62. (New) The vessel filter according to Claim 60, wherein said at least one brace (47) is movably connected to individual conductor loop windings (44).

63. (New) The vessel filter according to Claim 55 which further includes at least one brace (47) for fastening of the vessel filter, wherein said extension (46) is moveably arranged relative to brace (47).

64. (New) The vessel filter according to Claim 60, wherein said at least one brace (47) is made of bioresorbable material.

65. (New) The vessel filter according to Claim 41 which further includes at least one semiconductor element, especially a diode (D1-D4, D3', D4') and/or a transistor and/or an integrated circuit, that is formed on said vessel filter (10; 20; 40).

66. (New) The vessel filter according to Claim 41, wherein the conductor loop (11a, 11b; 21a, 21b, 21d-f; 41) is formed from a single material piece, especially a tube, wire or electrically-conducting plastic.

67. (New) The vessel filter according to Claim 41, wherein the one conductor loop (11a, 11b; 21a, 21b, 21d-f; 41) is produced by repeated lengthwise cutting of a tube (309) and then expansion.

68. (New) The vessel filter according to Claim 66, wherein the conductor loop (11a, 11b; 21a, 21b, 21d-f; 41) is guided on the ends of the single material piece, meander-like.

69. (New) The vessel filter according to Claim 41, wherein the conductor loop includes windings (14, 14a-d; 24; 301a-c; 44) that are joined on the ends by welding, gluing, clamping, sealing and/or shape-mating, especially by thermally initiated shrinkage of a cylinder of shape memory material.

70. (New) The vessel filter according to Claim 69, wherein at least one conductor loop winding (14, 14a-d; 24; 301a-c; 44) is provided with at least one hook, for example, an anchoring hook, for fastening in a vessel wall.

71. (New) The vessel filter according to Claim 41, wherein the vessel filter (10; 20; 40) has at least one connection device (28, 28a; 48a, 48b) for coupling to a device for introduction and/or extraction of the filter.

72. (New) The vessel filter according to Claim 41, wherein the vessel filter (10; 20; 40) contains at least one means (28a) for braking of the filter during introduction into the body.

73. (New) The vessel filter according to Claim 71, wherein the connection device (28, 28a; 48a, 48b) is constructed and arranged so that it simultaneously creates a braking device (28a) for the braking of the filter during introduction into the body.